

IN THE CLAIMS

1. (currently amended) A patient carestation adapted to be used in connection with a patient, said patient carestation providing a controlled environment surrounding a patient and having a monitor, at least one environmental sensor adapted to sense information concerning the environment surrounding a patient and to provide electronic signals to the monitor indicative of that environment, at least one physiological sensor adapted to obtain information relating to a physiological condition of a patient undergoing treatment and to provide electronic signals to the monitor indicative of a physiological condition of the patient, said patient monitor having signal processing system to receive signals from the at least one environmental sensor and the at least one ~~two~~ physiological sensor, to integrate those signals into an integrated output stream of signals that convey information relating both to the environment surrounding the infant and a physiological condition of the patient wherein the integrated output stream of signals is converted into ~~a an alpha-numeric~~ readout visually recognizable by a user that provides a recommended course of action to a user based upon the information relating both to the environment surrounding the patient and a physiological condition of the patient.

2. (original) The patient carestation as defined in claim 1 wherein a patient receives air through an airway and there is a therapeutic sensor that senses therapeutic information relating to conditions in the airway.

3. (original) The patient carestation as defined in claim 2 wherein a patient receives air through said airway by means of a ventilator.

4. (original) The patient carestation as defined in claim 3 wherein the therapeutic sensor senses information relating to the ventilation of a patient, including at least one of airway pressure, airway flow, tidal volume, and the concentration or partial pressure of gases in the airway.

5. (previously presented) The patient carestation as defined in claim 1 wherein the at least one physiological sensor comprises a sensor that senses at least one of weight, ECG, EEG, respiration, arterial blood pressure, non-invasive blood pressure, blood oxygenation, end tidal CO₂ concentration, patient skin temperature and electronic images.

6. (canceled)

7. (canceled)

8. (canceled)

9. (previously presented) The patient carestation as defined in claim 1 wherein the form visually recognizable by a user is an electronic image.

10. (original) The patient carestation as defined in claim 1 wherein the integrated output stream of signals is provided to a smart alarm.

11. (previously presented) The patient carestation as defined in claim 1 wherein said signal processing system includes a signal conditioning circuitry.

12. (original) The patient carestation as defined in claim 1 wherein said integrated output stream of signals is transmitted to a remote location.

13. (previously presented) The patient carestation as defined in claim 12 wherein said integrated output stream of signals is transmitted to the remote location by wireless telemetry.

14. (original) The patient carestation as defined in claim 1 wherein said patient

carestation is in an infant care apparatus.

15. (previously presented) The patient carestation as defined in claim 1 wherein the apparatus further includes an imaging device to provide electronic signals representative of an image of a patient and such signals are inputted to the signal processing system.

16. (original) The patient carestation as defined in claim 15 wherein the imaging apparatus is an X-ray machine that provides an electronic image of a patient.

17. (currently amended) A method of providing an integrated stream of data and information in a patient carestation relating to an operational parameter of the patient care apparatus and a physiological condition of a patient, said method comprising the steps of:

locating a patient carestation having a monitor in proximity to a patient to provide a controlled environment surrounding a patient;

providing at least one environmental sensor adapted to provide an output signal to the monitor indicative of ~~that~~ at least one environmental parameter of the controlled environment surrounding the patient;

providing at least one physiological sensor adapted to sense at least one physiological condition of a patient, and to provide an output signal to the monitor indicative of a physiological condition;

integrating the output signals within the monitor from the at least one environmental sensor and the at least one physiological sensor to obtain and provide a combined integrated stream of data and information at the monitor indicative of both an environmental parameter and a physiological condition of a patient, and

using the combined integrated stream of data and information to provide ~~a~~ ~~an alpha-numeric~~ visually recognizable by a user that provides a recommended course of action to a user based upon both a physiological condition sensed by the at least one physiological sensor and an environmental parameter sensed by the at least one environmental sensor.

18. (previously presented) The method as defined in claim 17 wherein the method further comprises the step of transmitting the combined integrated stream of data and information to a remote monitor to display the combined integrated stream of data and information in a visually perceptible form.

19. (previously presented) The method as defined in claim 18 wherein the step of transmitting the combined integrated stream of data and information to a remote monitor comprises transmitting by a wireless transmission.

20. (currently amended) The method as defined in claim 19 17 wherein the step of providing at least one physiological sensor adapted to sense at least one physiological condition of a patient, comprises providing a physiological sensor adapted to sense at least one physiological condition from the group comprised of weight, ECG, EEG, respiration, arterial blood pressure, non-invasive blood pressure and blood oxygenation, end tidal CO₂, patient skin temperature and x-ray data.

21. (previously presented) The method as defined in claim 17 wherein the step of providing at least one environmental sensor comprises providing at least one environmental sensor adapted to sense a parameter from the group comprised of air temperature, oxygen concentration and humidity.

22. (previously presented) The method as defined in claim 17 wherein the method further comprises the step of providing to the monitor a therapeutic input including information relating to a peripheral apparatus including a ventilator or an IV pump.

23. (original) The method as defined in claim 22 wherein the step of providing a therapeutic input comprises an input having information relating to at least one of airway pressure, airway flow, tidal volume, partial pressure of gases in the airway and drip rate.

24. (previously presented) The method as defined in claim 17 wherein the method further comprises the step of providing patient information to a patient information input of the monitor.

25. (previously presented) The method as defined in claim 17 wherein the patient carestation is an infant care apparatus.

26. (currently amended) A system integrated within an infant warming apparatus for monitoring physiological conditions of an infant and environment conditions surrounding the infant undergoing care in an infant warming apparatus providing a controlled environment surrounding a patient, said system comprising:

a monitor associated with the infant warming apparatus;

at least one environmental sensor adapted to sense the environmental conditions of an infant in the infant warming apparatus and to send electronic signals to the monitor indicative of an environmental condition;

at least one physiological sensors adapted to sense a physiological condition of an infant in the infant warming apparatus and to send a separate stream of electronic signals to the monitor indicative of a physiological condition of an infant;

the monitor having a signal processor adapted to receive the signals from the at least one environmental sensor and from the at least one physiological sensor, said signal processor integrating said signals into a integrated stream of electronic signals containing information relating to an environmental condition and a physiological condition, and

a diagnostic apparatus adapted to receive the integrated stream of electronic signals and use those signals to provide and display a ~~an alpha-numeric~~ readout visually recognizable by a user that provides a recommended course of action to a user based upon both a physiological condition sensed by the at least one physiological sensor and the at least one environmental condition sensed by the at least one environmental sensor.

27. (original) The system as defined in claim 26 wherein said at least one environmental sensor senses at least one parameter from the group comprised of air temperature, oxygen concentration and humidity.

28. (previously presented) The system as defined in claim 26 wherein said at least one physiological sensor senses a physiological condition of the infant from the group comprised of ECG, EEG, respiration, arterial blood pressure, non-invasive blood pressure, blood oxygenation, end tidal CO₂, patient skin temperature, x-ray data and weight.

29. (original) The system as defined in claim 26 where the system further includes a patient information input to provide information to said signal processor relating to the patient.

30. (original) The system as defined in claim 29 wherein the information relating to the patient includes at least one of patient history, current treatment, drugs administered, therapy administered, risk/history data, clinical findings and lab results such as CBC, bilirubin, electrolytes, hematocrit, and prior treatment to the patient.

31. (original) The system as defined in claim 26 where the system further includes a therapeutic information input to provide information to said signal processor relating to therapy administered to the patient by means of peripheral equipment including at least one of a ventilator and an IV pump.

32. (original) The system as defined in claim 31 wherein the therapeutic information includes at least one of airway pressure, airway flow, tidal volume, partial pressure of gases inhaled and drip rate.

33. (canceled)

34. (original) The system as defined in claim 26 wherein said integrated stream of electronic signals from said signal processor are digital signals.

35. (original) The system as defined in claim 26 wherein said signal processor includes an analog to digital converter.

36. (canceled)

37. (canceled)

38. (currently amended) A patient carestation for monitoring conditions of a patient under the care of a patient care apparatus providing a controlled environment surrounding a patient, said carestation comprising:

a monitor;

at least one environmental sensor adapted to sense an environmental condition of a patient cared for by the patient care apparatus and to send electronic signals to the monitor indicative of an environmental condition;

at least one physiological sensor adapted to sense a physiological condition of a patient cared for by the patient care apparatus and to send electronic signals to the monitor indicative of a physiological condition of a patient;

at least one therapeutic sensor adapted to sense a therapy condition relating to the administration of care to a patient by a peripheral apparatus;

the monitor having an input for receiving patient information relating to a patient in the form of electronic signals;

the monitor having a signal processor adapted to receive electronic signals from the at least one environmental sensor, the at least one physiological sensor, the at least one therapeutic sensor and the electronic signals representative of patient information received by said input, said signal processor integrating said electronic signals into an integrated stream of electronic signals; and.

a diagnostic apparatus adapted to receive the integrated stream of electronic signals and use all of those electronic signals from the at least one environmental sensor, the at least one physiological sensor, the at least one therapeutic sensor and the electronic signals representative of patient information to provide and visually display diagnostic information for treating conditions of a patient

39. (canceled)

40. (canceled)

41. (original) The patient carestation as defined in claim 38 wherein the input is adapted to receive patient information from a hospital central record storage facility.

42. (canceled)

43. (original) The patient carestation as defined in claim 38 wherein a patient receives air through an airway and the at least one therapeutic sensor senses therapeutic information relating to conditions in the airway.

44. (original) The patient carestation as defined in claim 43 wherein a patient receives air through said airway by means of a ventilator.

45. (original) The patient carestation as defined in claim 43 wherein the at least one therapeutic sensor senses information relating to the ventilation of a patient from the group comprising airway pressure, airway flow, tidal volume, and the concentration or partial pressure of gases in the airway.

46. (original) The patient carestation as defined in claim 38 wherein the at least one environmental sensor senses at least one environmental condition from the group comprised

of air temperature, oxygen concentration and humidity.

47. (original) The patient carestation as defined in claim 38 wherein the at least one physiological sensor comprises at least one physiological sensor that senses at least one condition from the group comprising weight, ECG, EEG, respiration, arterial blood pressure, non-invasive blood pressure, blood oxygenation, end tidal CO₂ concentration, patient skin temperature and electronic images.